

MacLeod* concludes that the less specialized flowers, as well as insects, prefer the springtime, while the more highly specialized prefer the later months. This anticipates my statement of the same general result.

CHARLES ROBERTSON.

CARLINVILLE, ILLINOIS.

BRISSON'S GENERA OF MAMMALS, 1762.

IN 1756 Brisson published, in Paris, the mammal volume of his '*Regnum Animale in Classes IX Distributum*.' It is a quarto, with the descriptive matter in French and Latin, in parallel columns, and contains a folding table or key on which the generic names are given in proper Latin form. But since the work antedates by two years the 10th edition of Linnaeus' *Systema Naturæ*, which by common consent is accepted as the starting point in Zoölogical nomenclature, the names cannot be used. Six years later, however, a second edition of Brisson appeared. It is a rare octavo, wholly in Latin, and was printed at Leyden in 1762†. It is of special importance because it falls between the two editions of Linnaeus that are available in Zoölogical nomenclature (10th Ed., 1758; 12th Ed., 1766), and hence may be considered, so far as the genera of mammals are concerned, as a part of the foundation of the nomenclature. The specific names are not exclusively binomial and cannot be used, but the generic names given in the keys (pp. 12-13 and 218) are in due Latin form, and are entitled to recognition.

Although the work was not printed until four years after the 10th edition of Linnaeus, the 6th edition (1748) is the only one quoted. Still 25 of the 46 genera given are the same as those published by Linnaeus in the

10th Ed. (1758). Of the remaining 21, ten are strictly synonymous with and antedated by Linnaean genera, and consequently cannot be used either in a generic or sub-generic sense. These are:

Brisson, 1762.		Linnaeus, 1758.
Pholidotus	=	Manis
Tardigradus	=	Bradypus
Cataphractus	=	Dasypros
Hircus	=	Capra
Aries	=	Ovis
Musaraneus	=	Sorex
Prosimia	=	Lemur
Philander	=	Didelphis
Cetus	=	Physeter
Ceratodon	=	Monodon

The remaining eleven are introduced by Brisson for the first time and are entitled to recognition. They are:

Odobenus	Glis
Giraffa	Pteropus
Tragulus	Hyæna
Hydrochærus	Meles
Tapirus	Lutra
Cuniculus	

Most of these are now in current use, but are attributed to later writers, and in several cases wrong species are taken as types. Carrying the date back to 1762 not only gives them greater stability, but also establishes the types in a satisfactory manner. All but one of the genera take Linnaean species for types, as follows:

The type of *Odobenus* is *O. odobenus* Brisson = *Phoca rosomarus* Linn., which becomes *Odobenus rosomarus* (Linn.) 1758. It thus seems as if the Walrus, after oscillating for a century and a half between *Odobenus* and *Trichechus*, might fairly claim a permanent abiding place.

The type of *Giraffa* is *G. giraffa* Brisson = *Cervus camelopardalis* Linn., which becomes *Giraffa camelopardalis* (Linn.) 1758.

The type of *Tragulus* is *T. indicus* Brisson = *Capra pygmaea* Linn., which becomes *Tragulus pygmaeus* (Linn.) 1758.

* Over de bevruchting der bloemen in het Kempisch gedeelte van Vlaanderen. Bot. Jaarboek, VI., 1894.

† *Regnum Animale in Classes IX. Distributum* . . . Quadrupedum & Cetaceorum . . . A. D. Brisson . . . Editio altera auctior . . . Lugduni Batavorum . . . 1762.

The type of *Hydrochaeris* is *H. hydrochaeris* Brisson=*Sus hydrochaeris* Linn. (12th Ed.), which becomes *Hydrochaeris hydrochaeris* (Linn.) 1766.

The type of *Tapirus* is *T. tapirus* Brisson=*Hippopotamus terrestris* Linn., which becomes *Tapirus terrestris* (Linn.) 1758.

The type of *Cuniculus* may be fixed on *C. cauda longissima* Brisson, which becomes *Cuniculus alactaga* (Olivier) 1800.* *Cuniculus* is one of the few genera in which Brisson did not indicate the type by repeating the generic name for the first species. It was made up of a heterogeneous assemblage comprising no less than six modern genera and five families of Rodents as follows :

<i>Cavia</i> Pallas	1766	(<i>Caviidæ</i>)
<i>Lemmus</i> Link	1795	(<i>Muridæ</i>)
<i>Calogenus</i> Cuv.	1807	{ (<i>Dasyproctidæ</i>)
<i>Dasyprocta</i> Ill.	1811	
<i>Anisonyx</i> Raf.	1817	(<i>Sciuridæ</i>)
<i>Allactaga</i> Cuv.	1836	(<i>Dipodidæ</i>)

According to the A. O. U. Code, therefore, *Allactaga*, having been left in *Cuniculus* until all the others had been taken out, must stand as the type of *Cuniculus*.

The type of *Glis* is *Glis glis* Brisson=*Sciurus glis* Linn. (12th Ed.), 1766, which becomes *Glis glis* (Linn.) 1766.

The type of *Pteropus* is *P. pteropus* Brisson=*Vespertilio vampyrus* Linn., which becomes *Pteropus vampyrus* (Linn.) 1758, replacing *Pteropus edulis* Auct.†

The type of *Hyaena* is *H. hyena* Brisson=*Canis hynæa* Linn., which becomes *Hynæa hynæa* (Linn.) 1758.

The type of *Meles* is *M. meles* Brisson=*Ursus meles* Linn., which becomes *Meles meles* (Linn.) 1758.

* *Dipus alactaga* Olivier, Bull. Soc. Philomatique, II., No. 40, 1800, p. 121; also Tilloch's Philosophical Mag., Oct., 1800, p. 90.

† See Gray, List of Specimens of Mammals, British Museum, 1843, p. 37; and particularly Thomas, Proc. Zool. Soc., London, 1892, p. 316, foot note.

The type of *Lutra* is *L. lutra* Brisson=*Mustela lutra* Linn., which becomes *Lutra lutra* (Linn.) 1758.

C. HART MERRIAM.

NOTES ON AGRICULTURE (I.)

ELECTRO-HORTICULTURE.

THE latest results drawn from experiments with electric light upon vegetation are by Professor Rane in Bulletin No. 37 of the West Virginia Experiment Station. Investigations along this general line began in 1861, when Herve-Mango demonstrated that electric light can cause the formation of green material (chlorophyll) in plants and produce other phenomena, as turning toward the light (heliotropism). Prilleaux, in 1869, showed that assimilation in plants goes on in the presence of artificial light. Dr. Siemens experimented largely with arc lights, both within and at other times outside of and above the plant houses. Professor Bailey, who at Cornell University has tested electric lighting extensively during the past few years, in reviewing Dr. Siemens' work, writes: "He used the term electro-horticulture to designate this new application of electric energy. He anticipated that in the future the horticulturist will have the means of making himself particularly independent of solar light for producing a high quality of fruit at all seasons of the year . . . whatever may be the value of electric light to horticulture, the practical value of Siemens' experiments is still great." After years of trial Professor Bailey stated in one of his reports: "I am convinced that the electric light can be used to advantage in the forcing of some plants."

In the fall of 1892 Professor Rane introduced the use of the incandescent light in place of the arc lamp, and his recent report with its illustrations from photographs of plants, etc., has features of interest to all who are interested in science, as well as the